

Atty. Dkt. No. 041673-2054

3. The method according to Claim 2, wherein the targeted neurons are dopaminergic neurons.
4. (Currently Amended) The method according to Claim 1, wherein the viral expression vector is a lentiviral vector HIV-1.
5. The method according to Claim 4 +, wherein the neurotrophic composition is a fluid having a concentration of neurotrophin encoding lentiviral particles in the range from  $10^{10}$  to  $10^{15}$  particles per ml of neurotrophic composition.
6. The method according to Claim 5, wherein from 2.5  $\mu$ l to 25  $\mu$ l of the neurotrophic composition is delivered to each delivery site.
7. (Currently Amended) The method according to Claim 1, wherein the treated mammal is a human and the transgene expression vector encodes a human neurotrophin.
8. The method according to Claim 7, wherein the neurotrophin is human glial cell-derived neurotrophic factor (GDNF).
9. The method according to Claim 7, wherein the human is suffering from Parkinson's disease, and the disease is ameliorated by stimulation of growth of dopaminergic neurons.
10. The method according to Claim 9, wherein the disease is ameliorated by reversal of deficits in motor function associated with the Parkinson's disease.
11. The method according to Claim 7, wherein the human is suffering from Alzheimer's disease, and the disease is ameliorated by stimulation of growth of cholinergic neurons.

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12. The method according to Claim 11, wherein the disease is ameliorated by improvement of cognitive function whose impairment was associated with Alzheimer's disease.

Please add the following new claims:

13. (New) The method according to Claim 1, wherein the neurotrophin is neurturin.
14. (New) The method according to Claim 1, wherein the neurotrophin is NGF.
15. (New) The method according to Claim 1, wherein the neurotrophine is NT-4/5.
16. (New) The method according to Claim 1, wherein the neurotrophin is persephin.
17. (New) The method according to Claim 1, wherein the expression vector is an adeno-associated vector.
18. (New) The method according to Claim 4, wherein the lentiviral expression vector is HIV-1.
19. (New) The method according to Claim 1, wherein the neurotrophin is expressed within 500  $\mu\text{m}$  of a targeted cell.
20. (New) The method according to Claim 1, wherein each direct delivery site is no more than 10 mm from another direct delivery site.